23. NOTES ON THE LEPIDOPTERA OF ASSAM

II—Some Additions to the Assam List, and other notes

4. Plastingia margherita margherita Doherty.

One ♀ was taken on 14-10-1951, and a ♂ on 16-11-1952, in Sibsagar District of Upper Assam. Evans (1949) lists three ♂♂ and one ♀ in the British Museum collection, from Manipur, Nagas, and Cachar, but not from Upper Assam.

5. Hidari bhawani de Niceville.

I took one ♀ at rest on a brick wall in June 1952. The only other known specimens of this exceedingly rare butterfly are another ♀ from Upper Assam, a ♂ from Burma, and another ♂ from Malaya.

6. Simiskina phalena harterti Doherty.

So far as Assam and Manipur are concerned there is only the record of one ♂, caught by Doherty in Upper Assam over 60 years ago. However, in early October 1952 I found this species in fair numbers at Moreh, the Indian frontier post on the Manipur-Burma border. Both sexes were present, and were behaving similarly. Some were basking with outstretched wings, sitting on leaves in the fitful sunshine, while others were attending, in company with ants, a large black aphid. Seven ♂♂ and three ♀♀ were taken, and many more were seen.

7. Lycaenopsis ceyx cerima Corbet.

Lycaenopsis ceyx is represented by *ceyx ceyx* in Java, *ceyx tanarata* from the Malay Peninsula, and *ceyx cerima* from S. Burma. The latter has hitherto only been known from three specimens collected by Brigadier W. H. Evans and two collected by Mr. D. Saunders, all five being ♂♂. A ♂ taken by me on 20-1-1952 in Sibsagar District of Upper Assam (plains level) represents a very considerable north-westward extension of the known range, and I am giving a detailed description since no full description of *cerima* exists, nor, indeed, any description of *L. ceyx* that is readily available to collectors in India.

♂, *Upperside, forewing.* Black border a thread along the costa, 2 mm. at apex and narrowing to 1 mm. at tornus. The rest of the wing is bright iridescent blue, the iridescence showing when viewed full face as well as slanting. When viewed full face no white areas are apparent, but when viewed slantwise grey areas appear at the bases of spaces 2 and 3. *Hindwing.* White streaks in spaces 4, 5 and 6, a large submarginal black spot in space 6, and indistinct submarginal black spots down to space 1. A marginal black line. *Underside, forewing.* Discal spots delicate and linear. Spot in space 1 present. Spots in 1 and 2 vertical, spot in 3 pointing towards the spot in 6. *Hindwing.* Spot in 7, spot at base of 2, and sub-basal spots are black; the others are brown. Cilia white. The androconia have 16-18 ribs, and are longer and narrower, with the ribs more closely packed, than those of *L. argiolus.*

Field Identification. At a quick glance *cerima* looks very like *L. argiolus sikkima*, but can readily be identified by the iridescent blue of the forewing, and the spot in space 1 b underfore.

8. **Amblypodia** spp.

There is no doubt that many of the species of this genus from Upper Assam and Manipur are less well known than they should be, and that much still remains to be worked out in connection with their classification. That this may in part be due to a failure to appreciate their habits is shown by the huge numbers that have come to hand in the past year. In the past I had considered myself lucky if in the course of a walk down a forest bridle path I had taken two or three specimens (mainly *centaurus*), and it was not till last spring that I realised what I was missing. I started going into the dense shade of the heart of the forest, up elephant paths and the narrower streams, and the results have been quite spectacular. On many occasions there have been perhaps a couple of dozen specimens, of five or six different species, on the wing at the same time, disturbed from the low foliage on which they usually sit inconspicuously with folded wings. On the other hand, this distribution is distinctly patchy, and there are places where thirteen species can be obtained together while the surrounding forest can produce none at all, or only the ubiquitous *centaurus*. The species which may be found in these huge numbers are *silhetensis*, *centaurus*, *eumolphus*, *bazaloides*, *paramuta*, *perimuta*, *paraganesa*, and *abseus* in Upper Assam (Sibsagar District), and *rama* and *asopia* in Manipur (Morch).

The rarer species taken this year include the following:—

(*a*) **A. anarte** Hewitson. Two ♂♂ from Nambar R.F., April. Probably the first record from the Assam Valley. Brigadier Evans took this species in Manipur (on the Irang River) and Mr. Antram in Cachar.

(*b*) **A. dispar diluta** Evans. Two ♂♂ from Nambar R.F., April. Corbet (1946) mentions 'females from Upper Assam', but I know of no other reference to this species from Assam, nor can I learn the whereabouts of the specimens to which Corbet refers.

(*c*) **A. arvina ardea** Evans. I took one ♀ in February a ♂ in mid-May, and a further eight (both sexes) in June, all from the Tiru Hills R.F. in Sibsagar District. This purely Upper Assam sub-species has very rarely been taken in the past.

(*d*) **A. ammonides elira** Corbet.

A. ariel ariel Doherty.

Elira appears to have been taken previously only in the Khasi Hills, though I suspect Tytler's '*ariel*' from Nagas and Manipur (Peile, 1937) may, in fact, be *elira*. *Ariel ariel* is known only from a ♂ from Upper Assam, taken by Doherty, and now in the British Museum collection. I have taken many many specimens of *elira* (both sexes) in Sibsagar District in May, June and July, also one in March; and with them four or five *ariel* all ♂♂. The specimens of *ariel* correspond with the type in the B.M. My specimens of *elira* are most variable

as regards the white costal spot underhind which varies from an intense silvery white through all gradations to a specimen with so few white scales as to be almost indistinguishable from *ariel*. In fact it is not always possible to distinguish the two species from the facies, and Corbet (1946) has already pointed out that the male genitalia are 'similar'. I am of opinion that the two forms will eventually be classified as varieties of the same species.

Larva and Pupa of *elira*. I was fortunate to obtain one full-grown larva of *elira* on 25th May 1952. This pupated on 27th May, and the imago (a ♀) emerged on 4th June. The larva was on the upper side of the remains of a leaf, very pale and almost invisible, matching to perfection the silky new leaves, and partly hidden by the fluffy residue from eaten leaves.

Colour: Dirty white, the only contrast being the dorsal heart, showing through as an interrupted dark line. The head, normally kept retracted, is the same colour as the body. Total length 14 mm. The larva is much compressed dorso-ventrally and has a fringe of hairs of the ground colour projecting all round, serving further to camouflage its outline. There are no other hairs. A few small red and black ants were in half-hearted attendance. The pupa is 10 mm. long × 4 mm. (thorax) or 2 mm. (head), pale green and almost transparent, with a well marked flat cremasteric pad. The food-plant was the sapling of a dicotyledonous tree, on which I have also seen *A. arvina ardea* ovipositing.

It is a pleasure to acknowledge the indispensable help I have received from Sir Keith Cantlie who has compared my specimens with those in the B.M. collection; from Brigadier Evans who confirmed the identification of the two Hesperids; and from Mr. N. Bennett of the British Museum who dissected and studied the genitalia of *Lycaenopsis ceyx cerima*.

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References

Corbet, A. S. (1946): *Trans. ent. Soc. Lond.*, **96**: 78, 79.
Evans, W. H. (1949): Catalogue of the Hesperiidae from Europe, Asia and Australia in the British Museum, London.
Peile, H. D. (1937): Guide to collecting Butterflies of India, London, p. 273.

24. A NOVEL METHOD OF ERADICATING HORNETS

An incident that should be interesting and perhaps useful is that I had a swarm of hornets (species?) nesting in the double walling of my house beside the front door. The outside walling was of timber and inside of asbestos sheeting. The two walls were 6 in. apart and the nest finally attained such proportions that the two walls bulged outwards. The hornets also got angrier every day and finally no one could enter the house by the front door. I tried fire and sulphur smoke but had no success in driving away the insects. An old Shan came to my house one day and I mentioned the matter of these hornets and asked him